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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,813	09/11/2006	Barry Allen	ETF-0040	4455
23413	7590	03/05/2009	EXAMINER	
CANTOR COLBURN, LLP			NATARAJAN, MEERA	
20 Church Street				
22nd Floor				
Hartford, CT 06103				
			ART UNIT	PAPER NUMBER
			1643	
			NOTIFICATION DATE	DELIVERY MODE
			03/05/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/567,813	<b>Applicant(s)</b> ALLEN ET AL.	
	<b>Examiner</b> MEERA NATARAJAN	<b>Art Unit</b> 1643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-43 is/are pending in the application.
- 4a) Of the above claim(s) 24, 28, 29 and 34-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-23, 25-27, 30-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Applicant's arguments in the reply filed on 11/25/2008 is acknowledged and entered into the record.

2. Accordingly, Claims 21-43 are pending. Claims 24, 28, 29, 34-43 are withdrawn as being drawn to nonelected species and/or inventions.

3. Claims 21-23, 25-27, and 30-33 will be examined on the merits.

#### ***Claim Rejections Maintained - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The rejection of Claims 21-23, 25-27 and 30-33 under 35 U.S.C. 103(a) as being unpatentable over Murray et al. (J of Nuclear Medicine, Vol. 42, pp. 726-732, 2001) in view of Allen et al. (Critical Reviews in Onc./Hematology, Vol. 39, pp.139-146, 2001) is maintained for the reasons of record.

6. The Claims are drawn to a radioimmunoconjugate and radiopharmaceutical comprising an alpha-emitting radionuclide (Bi-213) bound to a monoclonal antibody, C595.

7. Murray et al. teach a radioimmunoconjugate comprising the c595 antibody labeled with a dual  $\beta$ - and  $\gamma$ - emitting radionuclide to target bladder tumors (see Abstract). Murray et al. does not teach an antibody conjugated to an alpha-emitting radionuclide (Bi-213). This deficiency is made up for by Allen et al.

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8. Allen et al. teach alpha-immunoconjugates and alpha-protein conjugates, using the alpha-emitting radionuclide Bi-213 chelated to the targeting monoclonal antibodies (see p. 140, right column, lines 3-6). The chelating agents used were cDTPAa and CHX-A (see section 3.1, p. 142). These conjugates were found to be highly stable, specific and cytotoxic in vitro (see Abstract).

9. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to make a radioimmunoconjugate comprising the C595 monoclonal antibody and the alpha-emitting radionuclide Bi-213 based on the teachings of Allen et al. and Murray et al. One of ordinary skill in the art would have been motivated to do so with a reasonable expectation of success by the teachings of Allen et al. and Murray et al. because Murray et al. teach radioimmunoconjugates comprising radionuclides and the C595 monoclonal antibody and Allen et al. teach alpha-emitting radioimmunoconjugates are highly stable, specific and cytotoxic.

### ***Response to Arguments***

10. Applicants argue the combination of the teachings of Murray et al. and Allen et al. would render Murray unsatisfactory for its intended purpose of treating bladder cancer. Applicant's provide evidence stated on p.9, line 21 of Applicant's PCT Application, that alpha emitting radionuclides bound to C595 antibodies have found to be "*ineffective in treating bladder cancer*". Applicant's state "if one were to replace the beta emitters of Murray with the alpha emitters of Allen, the treatment taught in Murray would be ineffective with regards to bladder

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cancer. Therefore, a combination of Murray and Allen is improper because there is no suggestion or motivation to make the proposed modification." These arguments have been carefully considered, but not found persuasive.

11. Allen et al. provide distinct motivation for the use of alpha-emitting radionuclides, such as Bi-213. Allen et al. teach alpha-emitting conjugates were found to be highly stable, specific and cytotoxic in vitro. One of ordinary skill in the art at the time of the two references cited above (2001) would have been motivated to make a radioimmunoconjugate comprising the C595 antibody and the alpha-emitter Bi-213 based on the teachings of Murray et al. and Allen et al. The "ineffective" results of treating bladder cancer with alpha emitting radionuclides bound to C595 antibodies demonstrated by the applicant were performed after the publication of the references cited above. Based on the teachings of Allen et al. and in other publications such as Syed et al. (cited on PTO-1449, filed 02/09/2006) that alpha emitters are useful for the treatment of cancer and in particular are more efficient than beta-emitters for micro-metastasis and tiny clusters of cancer cells, one of ordinary skill in the art would have been motivated to try a radioimmunoconjugate comprising the C595 antibody and the alpha-emitter Bi-213 for therapeutic uses in cancer, including bladder cancer. Therefore, the combination of Murray et al. and Allen et al. would anticipate the claimed product, irregardless of whether or not the compound would have been effective in treating bladder cancer. Applicant is reminded that the intended use of a product claim carries no patentable weight [see MPEP 2111.02]. The rejection of record is therefore, maintained.

***Conclusion***

12. Claims 21-23, 25-27 and 30-33 are rejected.
13. No Claim is allowed.
14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEERA NATARAJAN whose telephone number is (571)270-3058. The examiner can normally be reached on Monday-Thursday, 9:30AM-7:00PM, ALT. Friday. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MN

/Larry R. Helms/  
Supervisory Patent Examiner, Art Unit 1643